

CLAIMS

What is claimed is:

1. A method for recovering DNA, RNA or proteins from a formalin-fixed paraffin-embedded biological tissue sample comprising:

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deparaffinizing the sample;

heating the sample in a chaotropic solution comprising an effective concentration of a guanidinium compound to a temperature in the range of about 50 to about 100 °C for a time period of about 5 to about 120 minutes; and

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recovering said RNA, DNA or protein from said chaotropic solution.

2. The method of Claim 1 further comprising rehydrating the deparaffinized sample before heating.

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3. The method of Claim 2 further comprising homogenizing said sample before heating.

4. The method of Claim 3 for recovering RNA from a biological tissue sample wherein said RNA is recovered by extraction from said chaotropic solution with a water insoluble organic solvent.

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5. The method of Claim 4 wherein said water insoluble organic solvent comprises chloroform.

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6. The method of Claim 5 further comprising purifying said RNA.

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7. The method of Claim 6 wherein said RNA is purified by ethanol precipitation.

8. The method of Claim 1 for recovering RNA wherein said time period is
5 from about 10 to about 60 minutes.

9. The method of Claim 8 wherein said time period is from about 30 to about
60 minutes.
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10. The method of Claim 1 for recovering RNA wherein said guanidinium
compound is guanidinium hydrochloride.
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11. The method of Claim 1 for recovering RNA wherein said guanidinium
compound is guanidinium isothiocyanate.

12. The method of Claim 11 wherein the concentration of said guanidinium
isothiocyanate in the chaotropic solution is about 2 to about 5M.
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13. The method of Claim 11 wherein said chaotropic solution has a pH of
25 about 3-6.

14. The method of Claim 1 for recovering RNA wherein said chaotropic
solution further comprises a reducing agent.
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15. The method of Claim 14 wherein said reducing agent is β -mercaptoethanol.

5 16. The method of Claim 14 wherein said reducing agent is dithiothreitol.

17. The method of Claim 1 wherein said RNA is used to determine the level of expression of a gene.

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